BOC
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User manual.

ZX trolley.

Date July 2011

ZX trolley. Safe transportation for medical gas cylinders.

Important

Please read this manual carefully before attempting to use the BOC Healthcare ZX trolley as it contains important information on the proper care, handling and use of the equipment. Keep this manual with the equipment or alternatively in a central place. (Note, there is a label on the trolley with brief user instructions).

The safety and performance of the trolley depends not only on the trolley but also on the ancillary equipment used with it. Ensure any ancillary equipment, especially cylinders, are compatible with the trolley. These instructions should be retained for reference during the life of the product. If you have any questions concerning the material contained in this manual, please contact BOC Healthcare on 08456 447 764.

Fire and explosion risk – when transporting gases

When handling medical gases in cylinders the following precautions should be followed.

Some materials which do not normally burn in air will burn in an atmosphere of oxygen, nitrous oxide or gas mixtures containing more than 21% oxygen. These gases do not burn themselves, but strongly support combustion, and therefore special attention should be directed to the hazards associated with smoking and naked flames.

When using medical gas cylinders it is most important that no part of the cylinder valve or equipment is either lubricated or contaminated with oil or grease. This is due to the risk of spontaneous combustion that can occur with high pressure gases in the presence of hydrocarbons. Special care is needed with the use of hand creams, as these could provide sufficient contamination to the cylinder valve when the cylinder is handled, to cause an ignition when the valve is turned on.

Intended use

The ZX trolley is intended to be used throughout the hospital to carry cylinders weighing a maximum of 20 kg (full weight) and measuring, height: 930-940 mm and diameter: 140-143 mm. It is designed for indoor use and equipped with anti-static wheels. The cylinder trolley is intended for use by porters and clinical staff who have received instruction in the correct use of the trolley. Do not use the equipment for any purpose other than its intended application.

1 Demand valve location device

2 Safety locking device – handle and rubber straps

3 Instruction label

4 Large anti-static wheels

5 Foot plate

6 Rubber mat

1. ZX trolley description

1.1 Overview

The trolley is designed to carry BOC Healthcare cylinders ZX, HX and F, or cylinders with the following specifications:

- Maximum cylinder weight: 20 kg (full weight)
- Height of cylinder: 930-940 mm
- Diameter: 140-143 mm

The product comprises:

- A steel frame
- A set of anti-static wheels
- Multiple bumpers
- Safety locking device to retain the cylinder
- A demand valve location device

1.2 Features

This trolley from BOC Healthcare has a range of innovative features that will make handling of medical gases easier and more convenient and provide your patients with additional benefits.

1 Demand valve location device
Incorporated in the trolley design is a convenient location device for holding demand valves and face masks.

2 Safety locking device – handle and rubber straps
Your ZX trolley has an easy to use cylinder locking strap – which will allow you to quickly and safely secure or release the cylinder. Once the cylinder is secured on the trolley with the strap, movement is restricted to help prevent damage and reduce noise levels for a quieter environment for your patients.

3 Instruction label
Conveniently located on the trolley are basic operating instructions that should be followed in order to avoid personal injury or damage to the equipment.

4 Anti-static wheels
The ZX trolley features large anti-static wheels to ensure easy and safe movement around the hospital.

5 Foot plate and rubber mat
6 The innovative design of your new trolley incorporates protective features that help to maintain the trolley in “tip top” condition. Bumpers and bungs under the footplate and the rubber mat help to prevent paint chipping and damage in order to keep the trolley looking clinically smart to suit the modern healthcare environment.

2. Operating precautions

- The ZX trolley is intended for use in medical facilities by porters or medical personnel.
- To minimise the risk of injury or damage to the equipment, the trolley should be sited on an even and stable surface.
- The trolley should only be used with appropriate sized cylinders as described in section 1.1.
- There are no operator-serviceable components inside the trolley. In the event of problems with the trolley, contact BOC Healthcare.
- Refer to ‘Gas Safe – with Medical Gases’ from BOC Healthcare for instructions on the safe use of gas cylinders or alternatively contact your BOC account manager to ask about training.

3. Instructions for use

3.1 Fitting a full cylinder

- Position the trolley on an even surface.
- Ensure that the cylinder to be fitted is of the appropriate type and that there is sufficient gas to carry out the intended treatment. If the cylinder is new, remove the tamper evident seal and the outlet cover.
- Ensure that the rubber strap is disengaged from the tube to ease access.
- Lift the cylinder onto the cylinder support base.
- Ensure that the cylinder is correctly located to the back of the support base and touching the bumpers on the steel tubes.
- Whilst placing a free hand on the cylinder trolley's handle, secure the cylinder with the safety locking device by pulling the rubber retaining strap, by the handle, and fitting the handle groove on the tube (see fig. 1). If necessary you can also place a foot on the foot plate to steady the trolley.
- Thereafter always secure the handle with the red safety strap (see fig. 2 and fig. 3).

Caution: To avoid risk of manual handling injuries or damage to the equipment:

- Ensure that the cylinders are correctly located and that the trolley is placed in a stable and secure place.
- Never lift the trolley when a cylinder (empty or full) is locked in place.

Caution: Incorrect cylinders

Ensure that only cylinders of the correct size and weight are fitted to the trolley. Refer to Section 1.1 for guidance.

3.2 Orientation of the cylinder on the trolley

It is important to ensure that, when the cylinder is in place on the trolley, there is easy access to the cylinder outlet and also that the live contents gauge (ZX and HX cylinders) can be easily monitored.

Caution: Unsecured medical gas cylinders

As per the Department of Health Estates and Facilities Alert ref: EFA/2010/008 issued 28 July 2010, managers and staff involved in the provision and use of medical gas supplies should ensure that gas cylinders and their trolleys be secured to a wall bracket or other static/stable structure to prevent them from toppling.

3.3 Removing an empty cylinder

- Position the trolley on an even surface.
- Ensure that the cylinder is turned off and equipment attached has been removed.
- Remove the red safety strap from the handle.
- Whilst placing a free hand on the cylinder trolley's handle, disengage the handle groove from the steel tube, by gently pulling the rubber retaining strap, via the handle. If necessary you can also place a foot on the foot plate to steady the trolley.
- Remove the cylinder from the cylinder trolley.

Fig. 1

Fig. 2

Fig. 3

4. Care and maintenance

4.1 Care

Remove general dirt with a soft cloth damped with soapy water and rinse with clean water. In case of blood or other contamination then disinfect with a suitable disinfectant. Ensure the product is cleaned in accordance with the hospital's hygiene plans. Do not use any oil-based products in the vicinity of an oxygen cylinder.

⚠ **Do not** use harsh or abrasive cleaning materials as damage may result.

⚠ **Do not** immerse in water or any liquid.

⚠ **Do not** expose to high temperature (e.g. autoclave).

4.2 Storage

The trolley is designed for indoor use only.

4.3 Maintenance recommendations

4.3.1 Prior to each use

Check the following for visible signs of wear or damage:

- Wheels
- Rubber straps and screws
- Handle and screws
- Bumpers on steel tubes and screws

If any of the above are worn or damaged, remove the equipment from use, contact BOC Healthcare and replace any faulty parts with new spare parts.

4.3.2 Annually

Check the following for visible signs of wear or damage:

- Wheels
- Rubber straps and screws
- Handle and screws
- Bumpers on steel tubes and screws
- Bumpers underneath foot plate
- Steel frame

If any of the above are worn or damaged, remove the equipment from use, contact BOC Healthcare and replace any faulty parts with new spare parts. If there is any damage to the steel frame, please contact BOC Healthcare for further instructions.

5. Spares and accessories

To maintain standards compliance, use only the following spares and accessories with this product.

5.1 Spares

Part no.	Part name
19310995	Kit rubber strap assembly (includes handle, strap, screws and plates)
19310996	Kit wheels and fixing
19310997	Kit rubber base plate
19310998	Kit bumpers, bungs and screws
19311712	Safety strap for handle
19310982	Adhesive instruction label

6. Environmental issues

There are no known risks associated with disposal of the cylinder trolley at the end of its working life. To preserve resources and to protect the environment, BOC Healthcare recommends that customers should extend the trolley's life span by replacing worn parts with new spare parts whenever it is feasible.

7. Reporting complaints

If a complaint is made, immediately inform BOC Healthcare on free-phone 08456 447 764 and we will ask you the following details:

- Customer name and address.
- Nature of the complaint and any serious consequences which may have arisen.
- Person you wish to receive the investigation report if required.

Then segregate and label the equipment and await instructions from BOC Healthcare.

8. Specifications

Items	Specifications	
Product name	ZX trolley	
Manufactured by	The ZX trolley is manufactured in the UK and assembled by Burnley Beadblasting Ltd.	
Warranty	12 months	
Dimensions	Height	1075 mm
	Width	330 mm
	Depth	320 mm
Weight	Without cylinder	9.8 kg
	With cylinder (typically)	20-29 kg
Environmental condition	Ambient temperature For indoor use only	

BOC Healthcare is continually developing its product range and reserves the right to alter the above specification without notice.

For accessories or technical support contact the BOC Customer Service Centre on 08456 447 764.

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